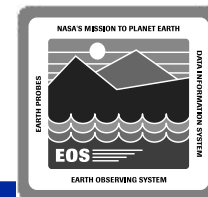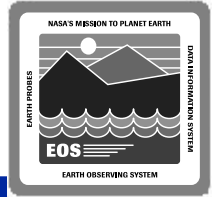# EP7 DMS - New Features

Data Dictionary Service (DDICT)

- **More Generic search service.**
  - **EP6 had "hard-coded" EP6 specific services, EP7 will allow client to search the DDICT service in a more generic manner.**
- **Client - Server interactions built on the Server Request Framework**
  - **Allows for asynchronous searching of the DDICT database for large transactions.**
- **Support for larger amount of data and testing of replication products between development and test environment.**

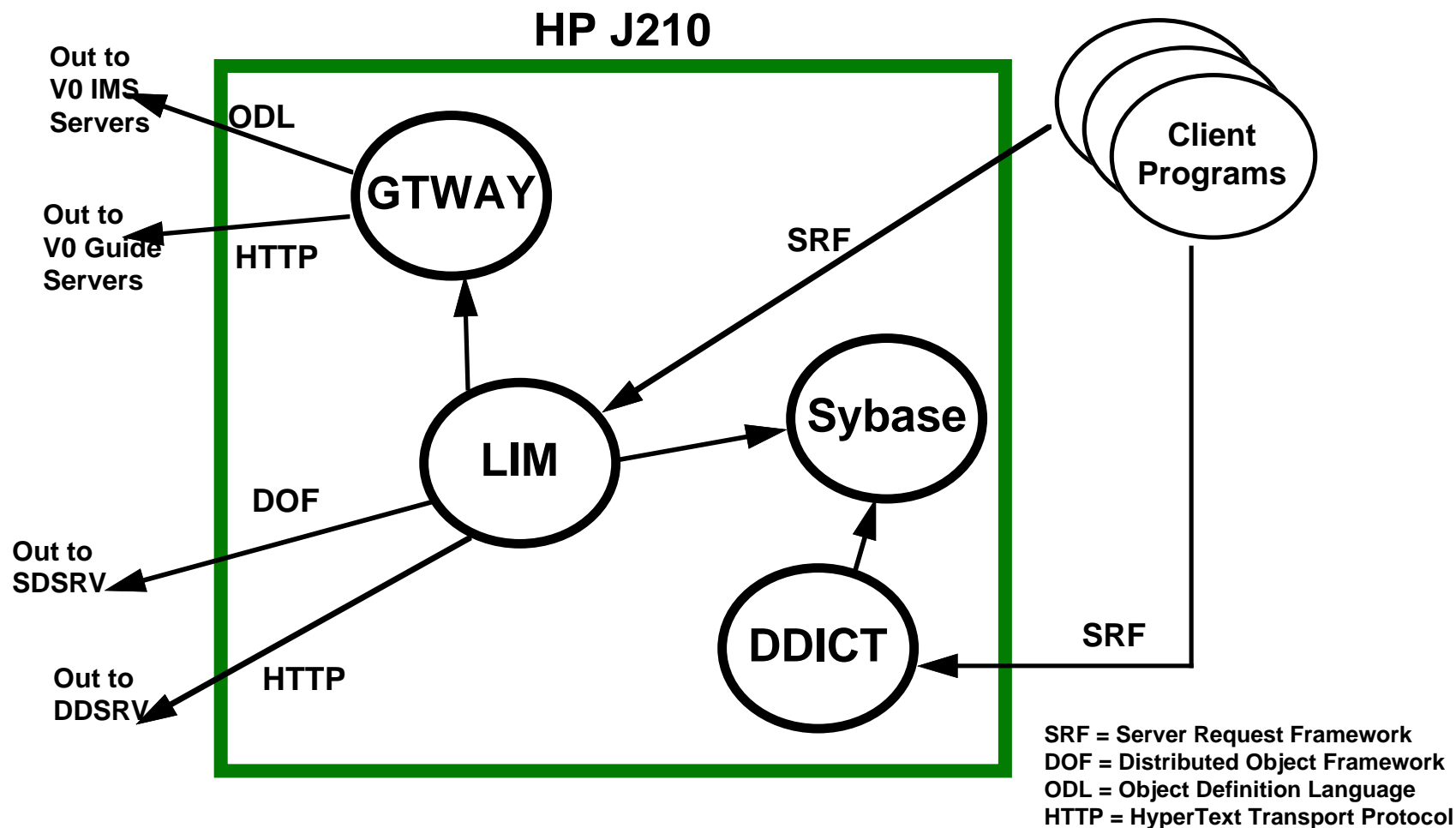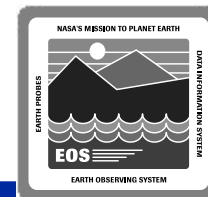**Local Information Manager (LIM)**

- **Reusing PW2 code, but enhancing it with CDR design**
- **Guide Search is new supported search type.**
- **Product Request never fully tested in PW2.**
- **Client - Server interactions will be rebuilt using the Server Request Framework to provide asynchronous request operations for search, browse, product request and guide search.**
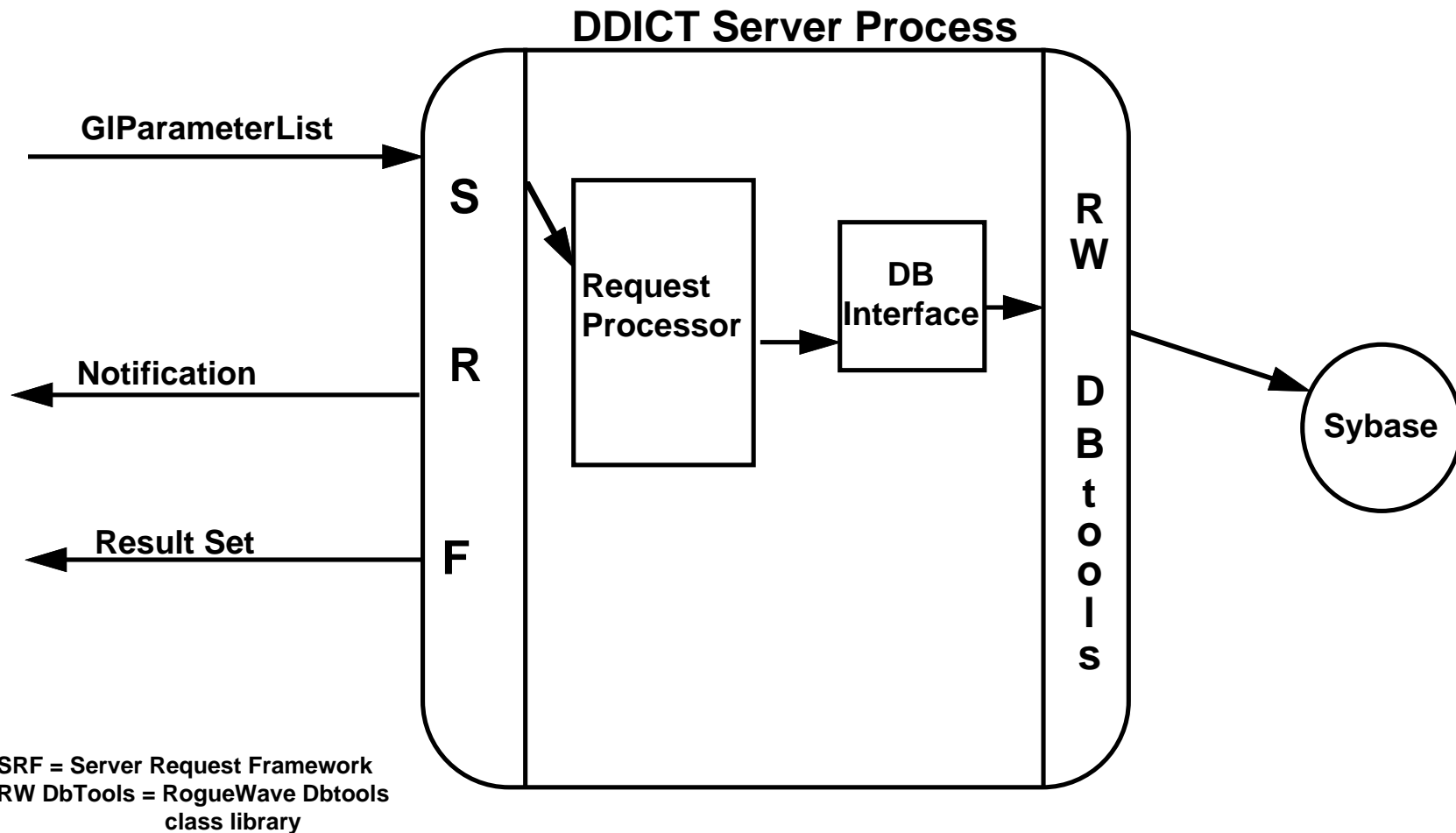
EP7 DMS - New Features (cont.)

- **V0 Gateway (GTWAY)**
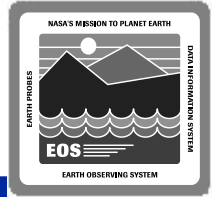 - **Reuse of PW2 inventory search and browse.**
  - **Test product request code that was written but never used in PW2.**
  - **Expand list of datasets accessible through the gateway.**
  - **Guide Search will be implemented to V0 Guide Servers.**
  - **Client - server interaction will be with the Server Request Framework to provide the LIM with asynchronous communications with the GTWAY.**

EP7 DMS Software Architecture

HP J210

Out to V0 IMS Servers — ODL

Out to V0 Guide Servers — HTTP

GTWAY

SRF

Client Programs

LIM

Sybase

DOF

Out to SDSRV

DDICT

HTTP

Out to DDSRV

SRF

SRF = Server Request Framework
DOF = Distributed Object Framework
ODL = Object Definition Language
HTTP = HyperText Transport Protocol

Data Dictionary Design

DDICT Server Process

GIParameterList →

S

R

Notification ←

R

Result Set ←

F

Request Processor → DB Interface →

R W D B t o o l s

Sybase

SRF = Server Request Framework
RW DbTools = RogueWave Dbtools
class library

Gateway Design

GTWAY Server Process

GlParameterList

Notification

Result Set

S R F

Request Processor

DBI

V0 External I/F

HTTP I/F

RW DBtools / IK LIB / HTTP

Sybase

V0 IMS Server

V0 Guide Server

SRF = Server Request Framework
IK Library = V0 client library
RW Dbtools = RogueWave Dbtools
class library
HTTP = HyperText Transport Protocol

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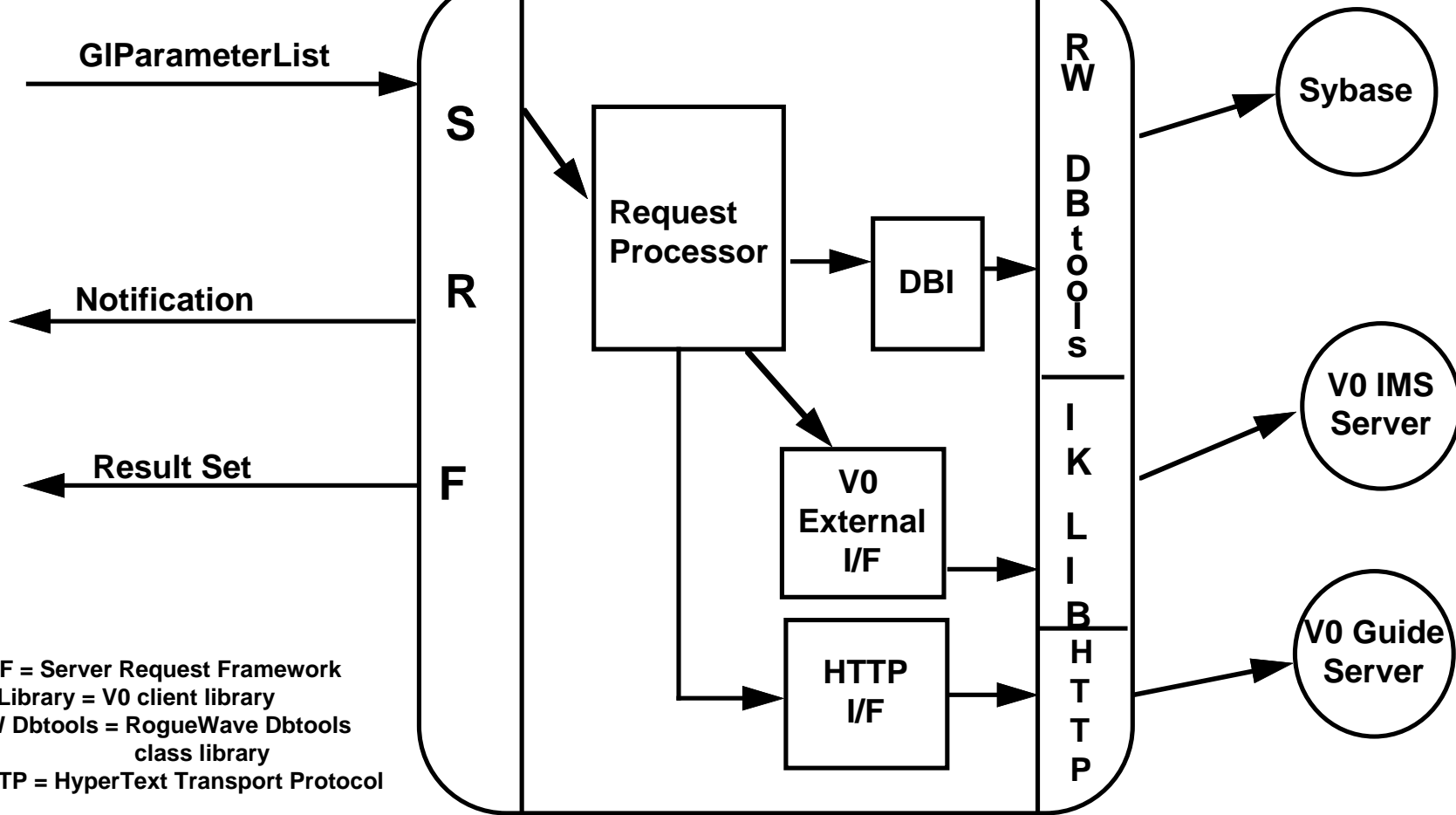
LIM Design

LIM Server Process

GIParameterList →

S R F

Notification ←

Result Set ←

Request Processor → DBI

IM External I/F

Data Server I/F

HTTP I/F

D B t o o l s

S R F

D S C L

H T T P

Sybase

GTWAY

SDSRV

DDSRV

SRF = Server Request Framework
IK Library = V0 client library
RW Dbtools = RogueWave Dbtools
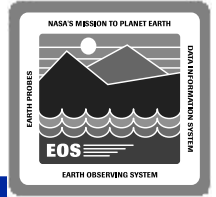   class library
HTTP = HyperText Transport Protocol
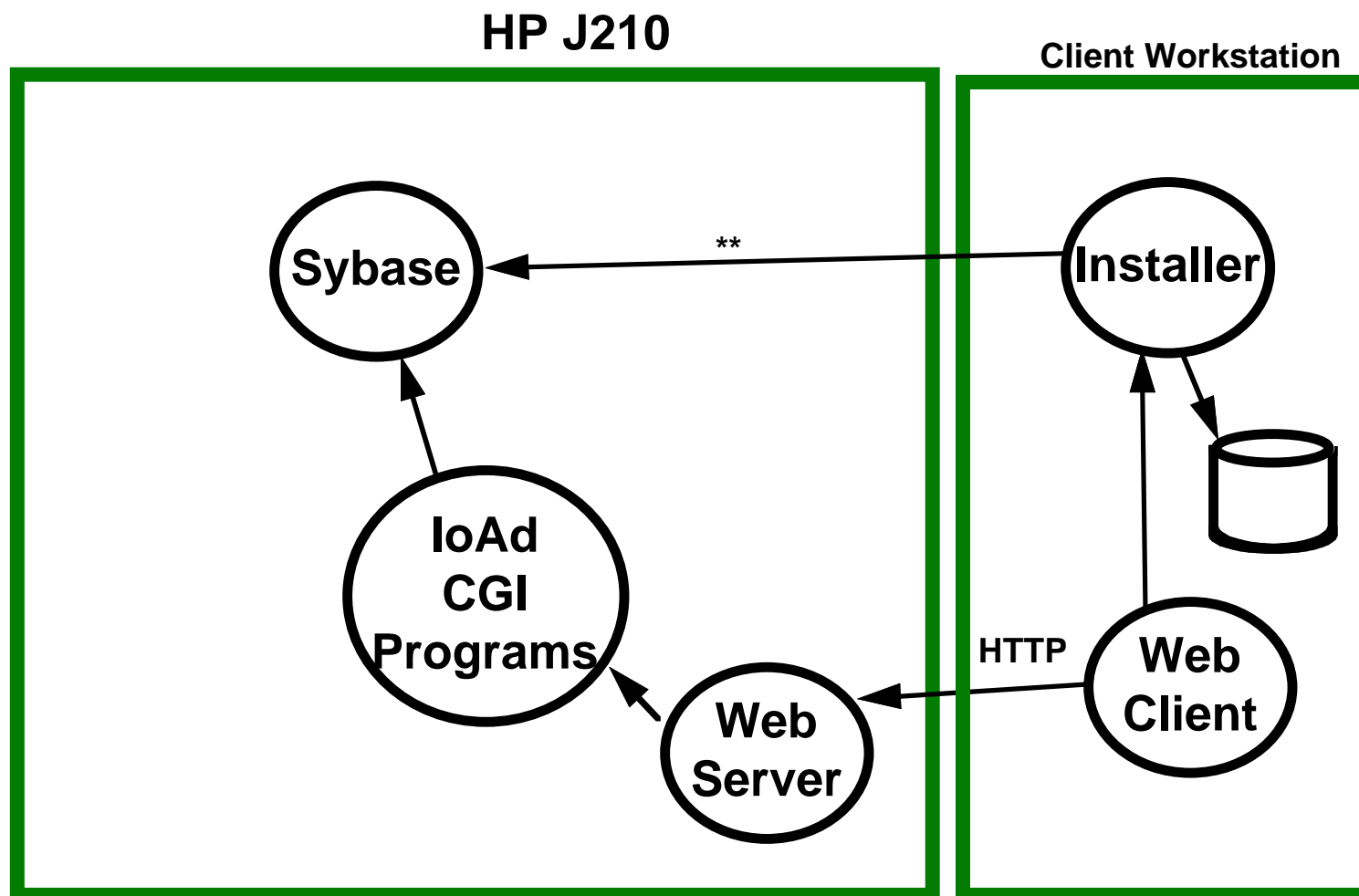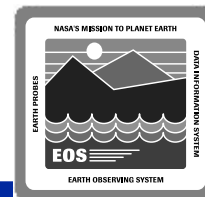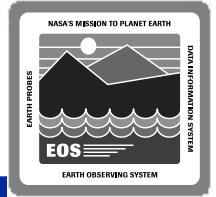DSCL = Data Server client library
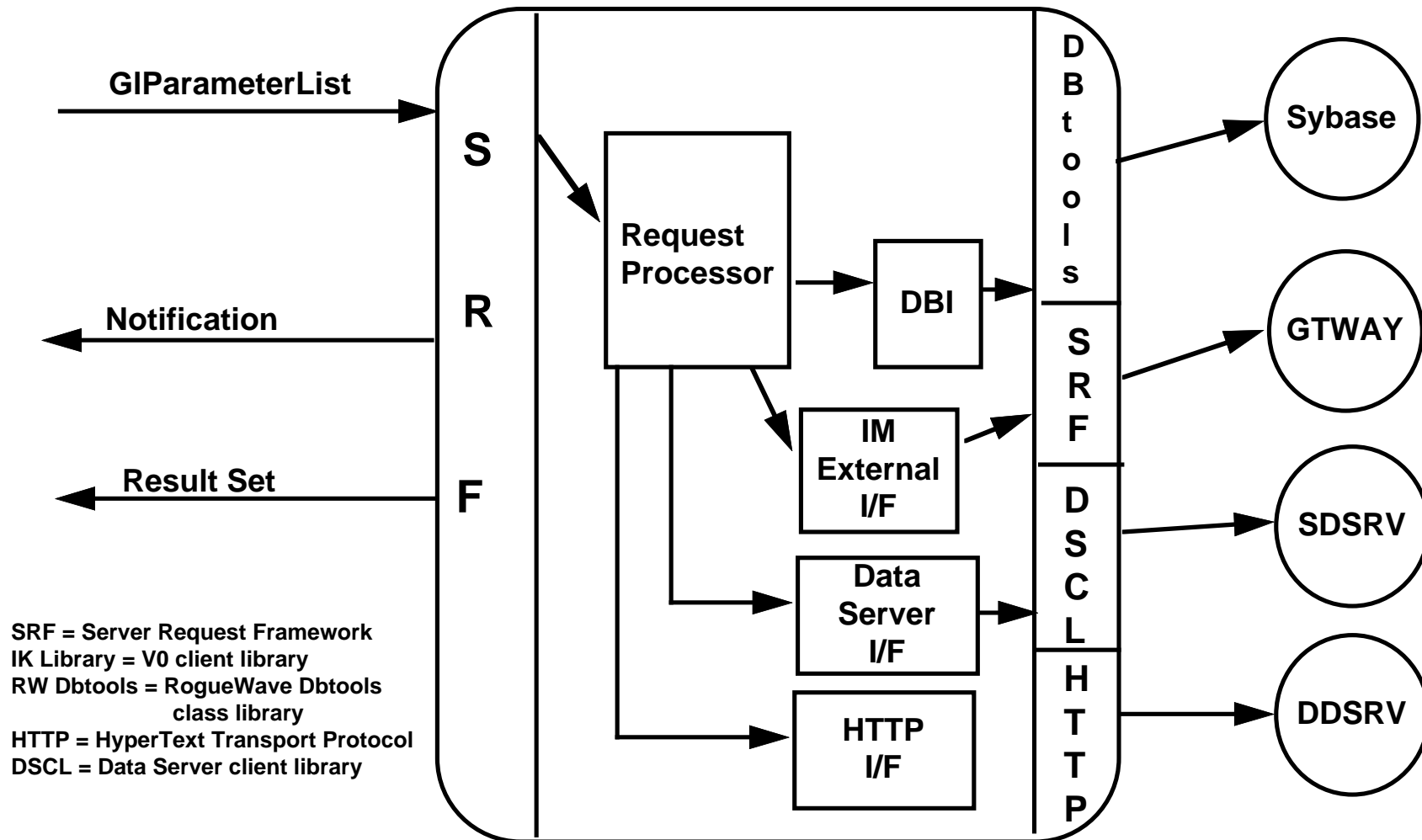
DMS Reuse

- **Reuse of PW2 code**
  - Inventory search, browse, and product request for GTWAY and LIM
- **Reuse of EP6 code**
  - Some reuse of EP6 code for the back end.
- **COTS**
  - Sybase 11 (the Release B baseline)
  - Sybase Replication Server will be used in-house for maintenance of replicated copies of DDICT.
- **Other OTS**
  - V0 IK library for interacting with V0 IMS Servers
  - TBD HTTP library for connecting and communicating with DDSRV and V0 Guide Servers.
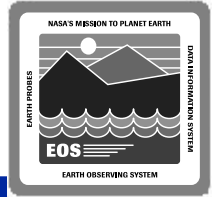
Advertising Service - Release A Phase II

- **Features Available:**
  - Searches of Advertisements - text search only
    - Alphabetic Index
    - Search for Contact Information as well
  - Submission of Advertisements - Service, Product, and Provider
  - Update of Advertisements and contact information
  - Deletion of Advertisements or contact information
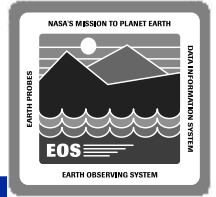
EP7 Advertising Service Architecture

HP J210

Client Workstation

Sybase

** (note marker on interface)

Installer

IoAd CGI Programs

Web Server

HTTP

Web Client

** note: This interface not valid at Release B

EP7 Enhancements

- **Reinstate the EP6 Installer Options with enhancements**
- **Pass the service context to the ESST**
  - **Installation of service will pass the current product context and the service that is being viewed to the ESST.**
- **Installer will have direct connection to the Advertising database to retrieve the service and product information.**
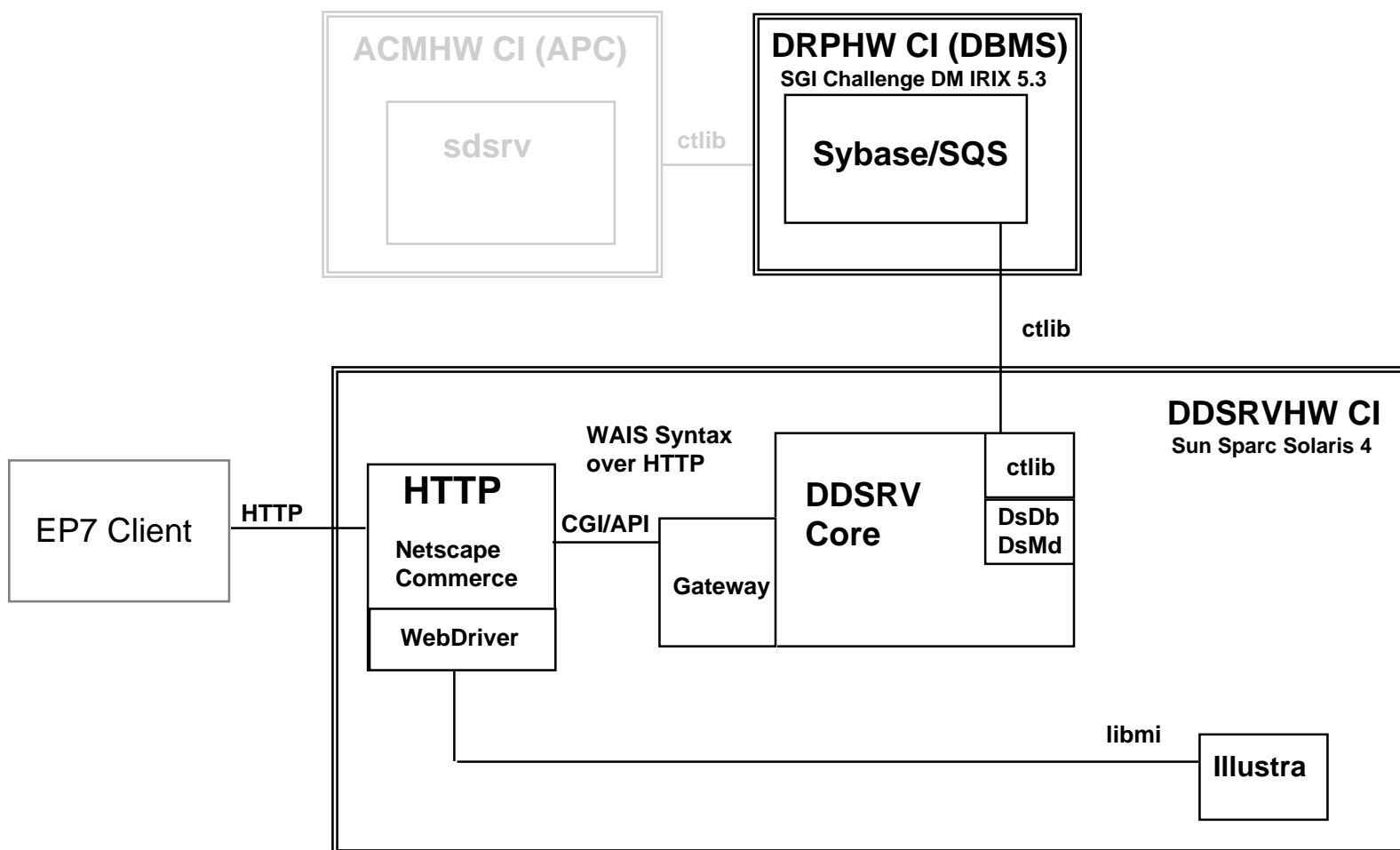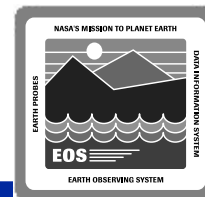- **Installation will create a desktop object for later use.**

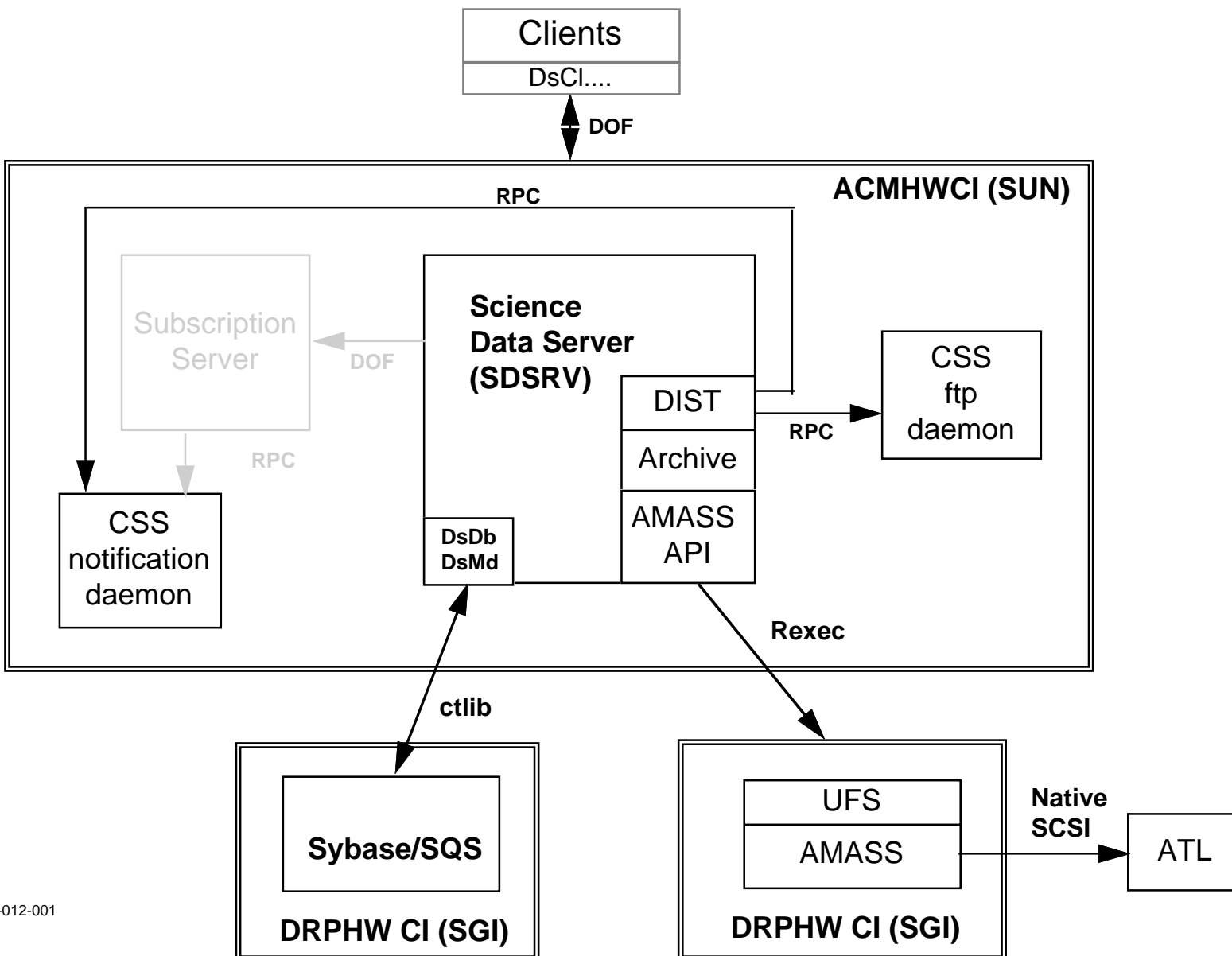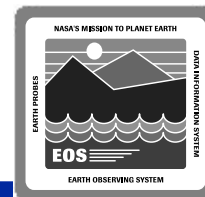# DSS for EP7 - Release A Phase II Data Server

Features:

- **Document Data Server with HTTP and WAIS interface to support Guide Search.**

- **Spatial searches to include polygon searches.**

- **Updated browse interface so there are no FTP parameters required by the user.**

- **Acquire support (product request) for electronic distribution only.**

DDSRV Phase II Architecture

ACMHW CI (APC)

sdsrv

ctlib

DRPHW CI (DBMS)
SGI Challenge DM IRIX 5.3

Sybase/SQS

ctlib

DDSRVHW CI
Sun Sparc Solaris 4

WAIS Syntax over HTTP

HTTP
Netscape Commerce
WebDriver

CGI/API

Gateway

DDSRV Core

ctlib
DsDb DsMd

EP7 Client

HTTP

libmi

Illustra
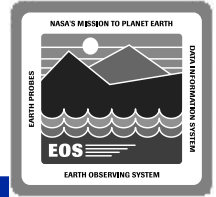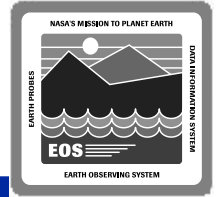
DSS Phase II Physical Architecture
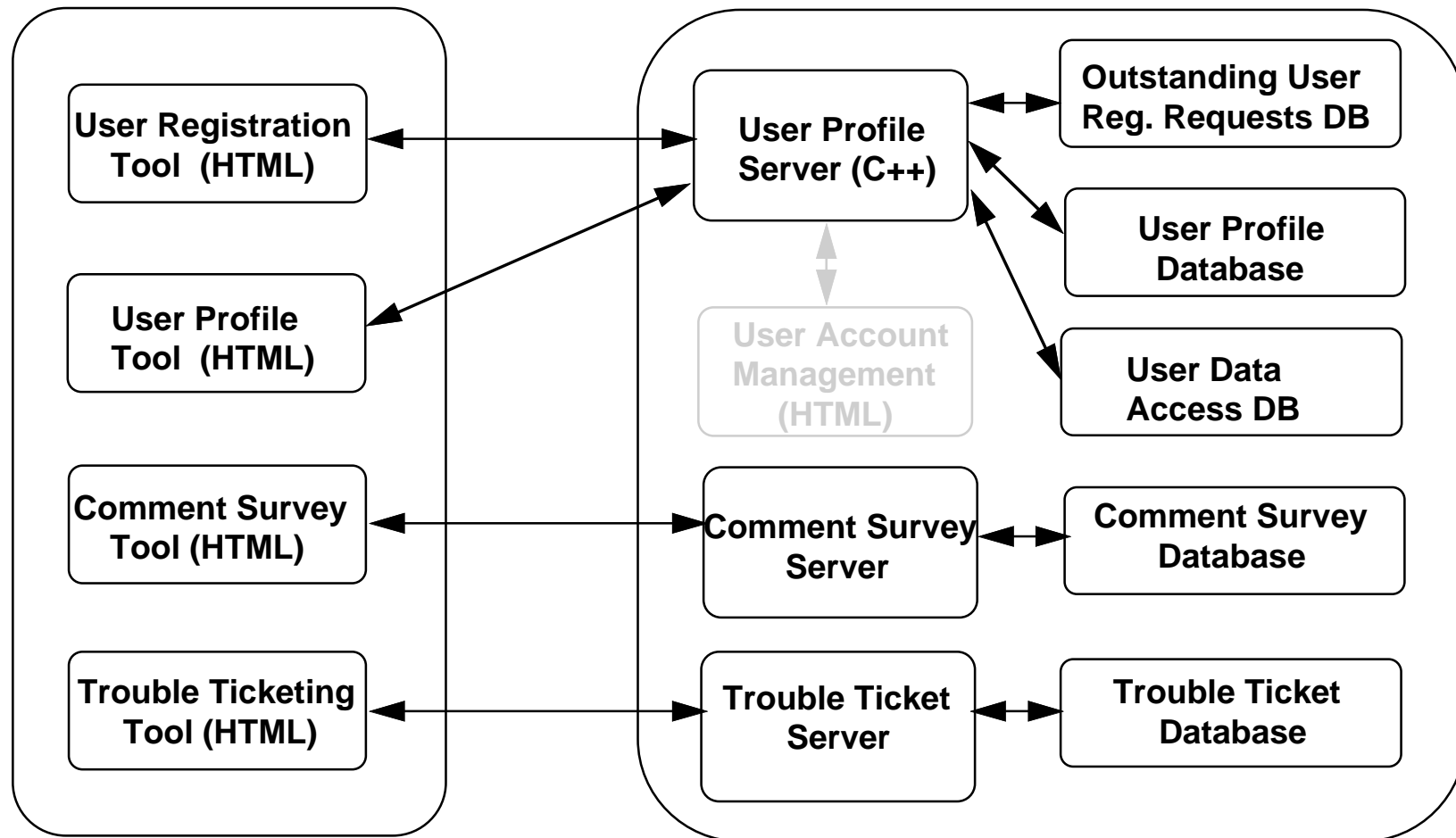
MSS Services for EP7

- **User Registration Service:**
    - **Incorporate Data Access capability**
- **Comment Survey Server:**
    - **Incorporate Timestamp and Software Version ID**
- **Trouble Ticketing:**
    - **Add email notification capability**
- **Mode Management Service:**
    - **Add multiple mode support**

- **MSS's role within EP7:**
    - **Support Client Services**
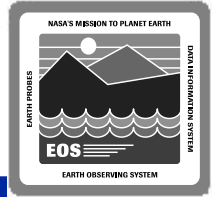   - **Early start on COTS integration for formal track components**

MSS Architecture

User Workstation

Host Computer

```
User Registration
Tool  (HTML)
```

```
User Profile
Tool  (HTML)
```

```
Comment Survey
Tool (HTML)
```

```
Trouble Ticketing
Tool (HTML)
```

```
User Profile
Server (C++)
```

```
User Account
Management
(HTML)
```

```
Comment Survey
Server
```

```
Trouble Ticket
Server
```

```
Outstanding User
Reg. Requests DB
```

```
User Profile
Database
```

```
User Data
Access DB
```

```
Comment Survey
Database
```

```
Trouble Ticket
Database
```

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MSS Support Functionality

User Registration Service

A User Data Access Database will be established

The user requests one specific role, which grants them privileges to the default data set.

They may also request permission to access additional data sets.

The data access privileges associated with the role will be stored in the User Data Access Database.

Comment Survey Server

When the Comment Survey Server receives the survey data, it will add a timestamp before inserting the data into the database.
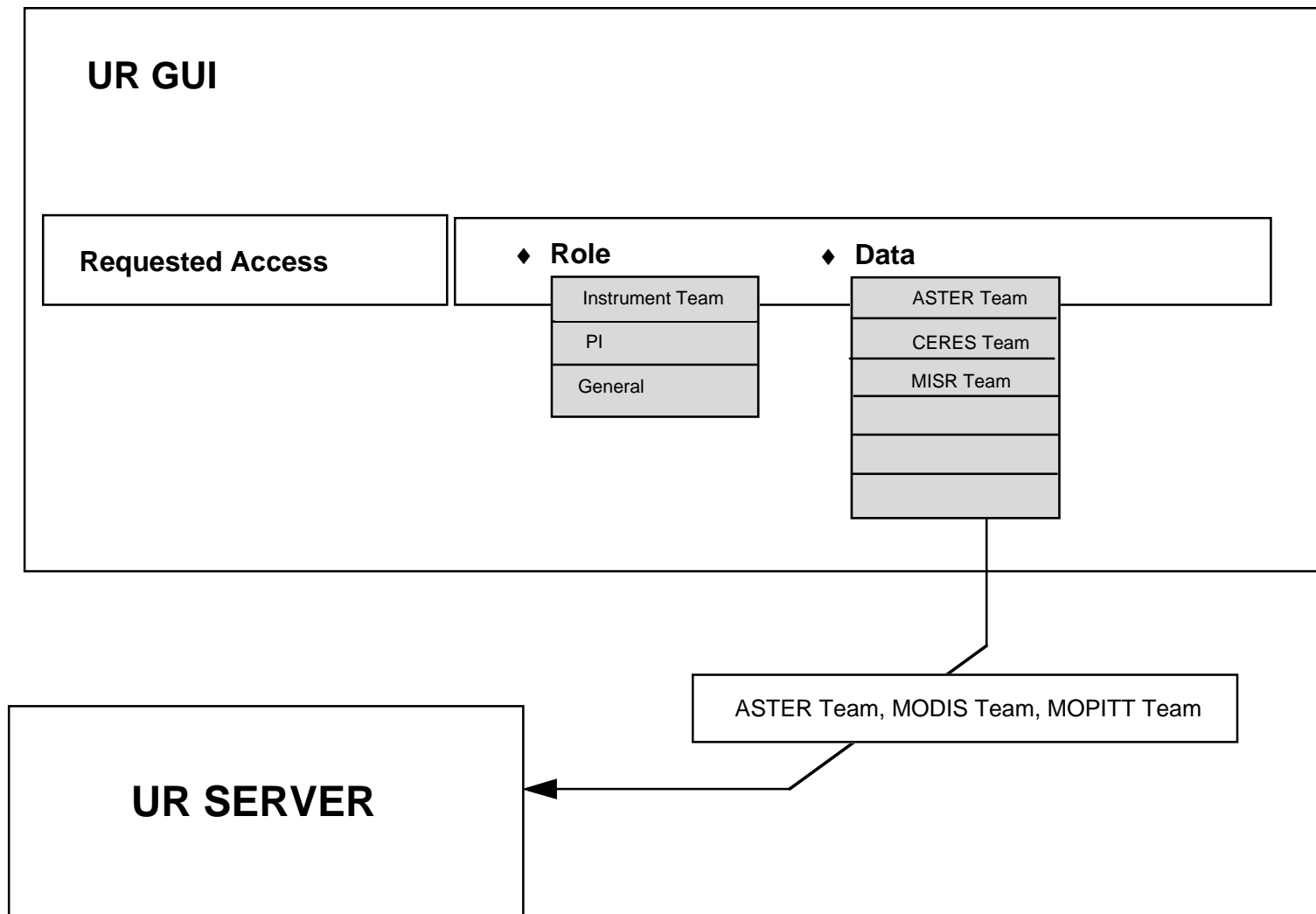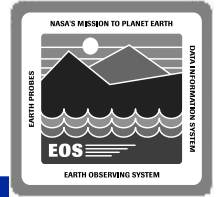
The client will provide the the Software Version ID attribute.
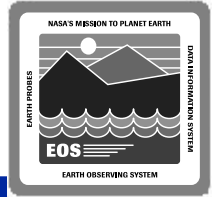
Trouble Ticketing

Forward Trouble Tickets (via e-mail) to Help Desk

Log Trouble Tickets into the Trouble Ticket Database

User Registration - Role and Data Access Concept

UR GUI

Requested Access

♦ **Role**

Instrument Team
PI
General

♦ **Data**

ASTER Team
CERES Team
MISR Team

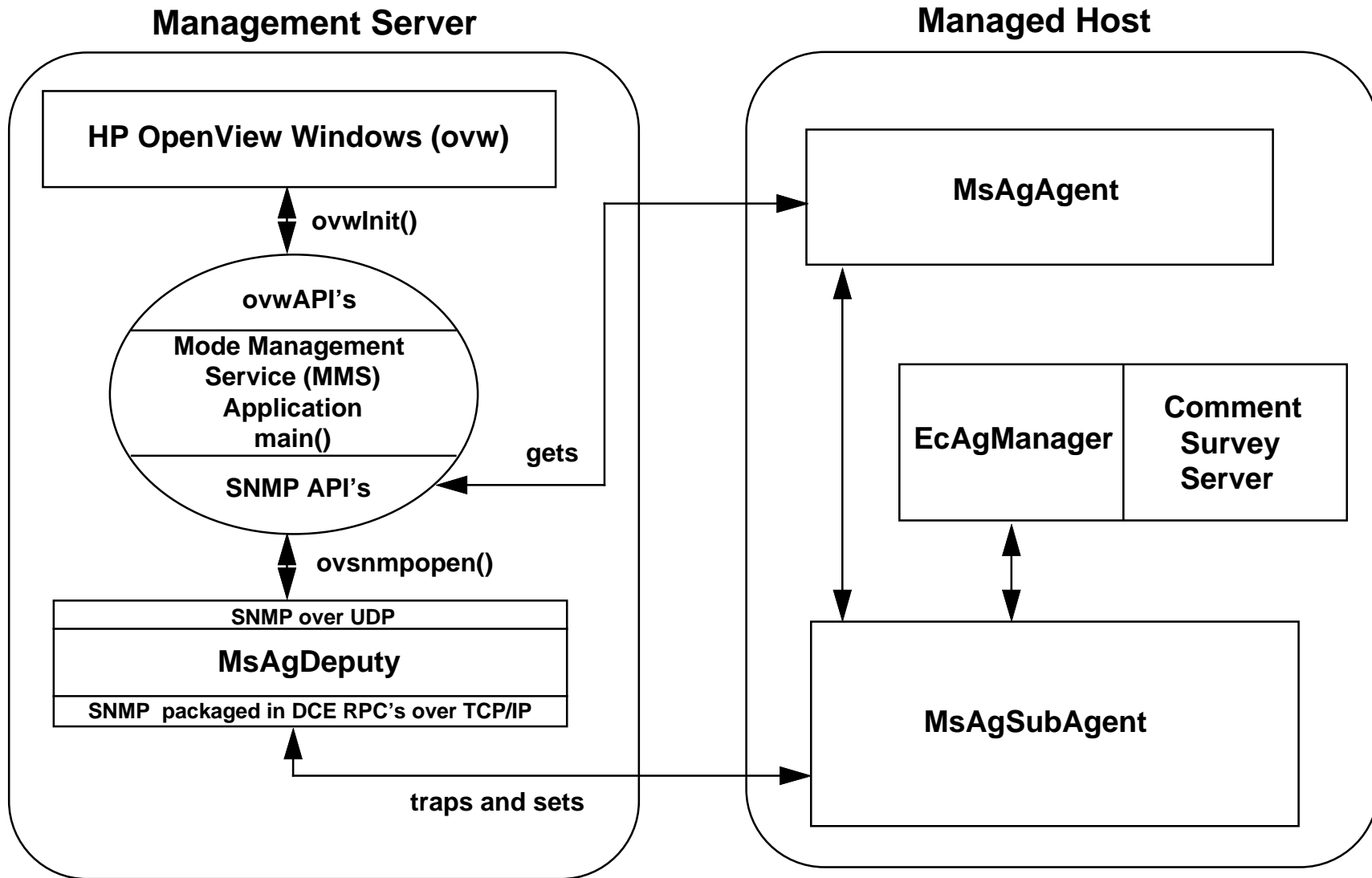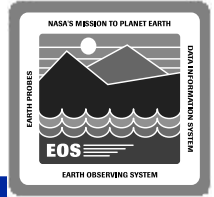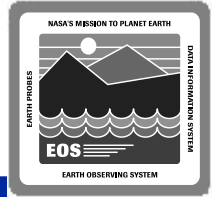| ASTER Team, MODIS Team, MOPITT Team |
|---|

UR SERVER

Mode Management

- **MSS will manage the Comment Survey Server application which will incorporate the mode management capability.**

- **Each mode will be represented in a separate HPOV session. All sessions will share the same ovw object database. The ovwAPI calls will determine which session to display a symbol on, based on the associated object's mode.**

Mode Management cont'd

Management Server

Managed Host

HP OpenView Windows (ovw)

ovwInit()

ovwAPI's

Mode Management Service (MMS) Application main()

SNMP API's

gets

ovsnmpopen()

SNMP over UDP

MsAgDeputy

SNMP packaged in DCE RPC's over TCP/IP

traps and sets

MsAgAgent

EcAgManager

Comment Survey Server

MsAgSubAgent

Mode Management cont'd

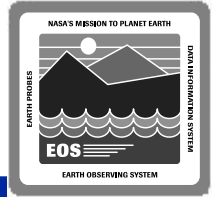- **The CS server application will register under different modes via configuration files.**

```
../../cfg/ops/CSserver.acfg

../../cfg/ts1/CSserver.acfg

../../cfg/ts2/CSserver.acfg
```

- **At startup, the subagent will discover the CS server in these modes. It will notify the HPOV and the application will appear in the appropriate mode submap in HPOV.**

- **The CS server can now be started by clicking on the appropriate icon. Since the icon is already tied to a specific mode, the operator does not need to specify the mode at this time.**

EP7 MSS Code Reuse
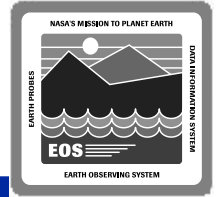
User Registration Server: Release A / Phase 2

Comment Survey Server: EP6

Trouble Ticketing: Release A / Phase 2
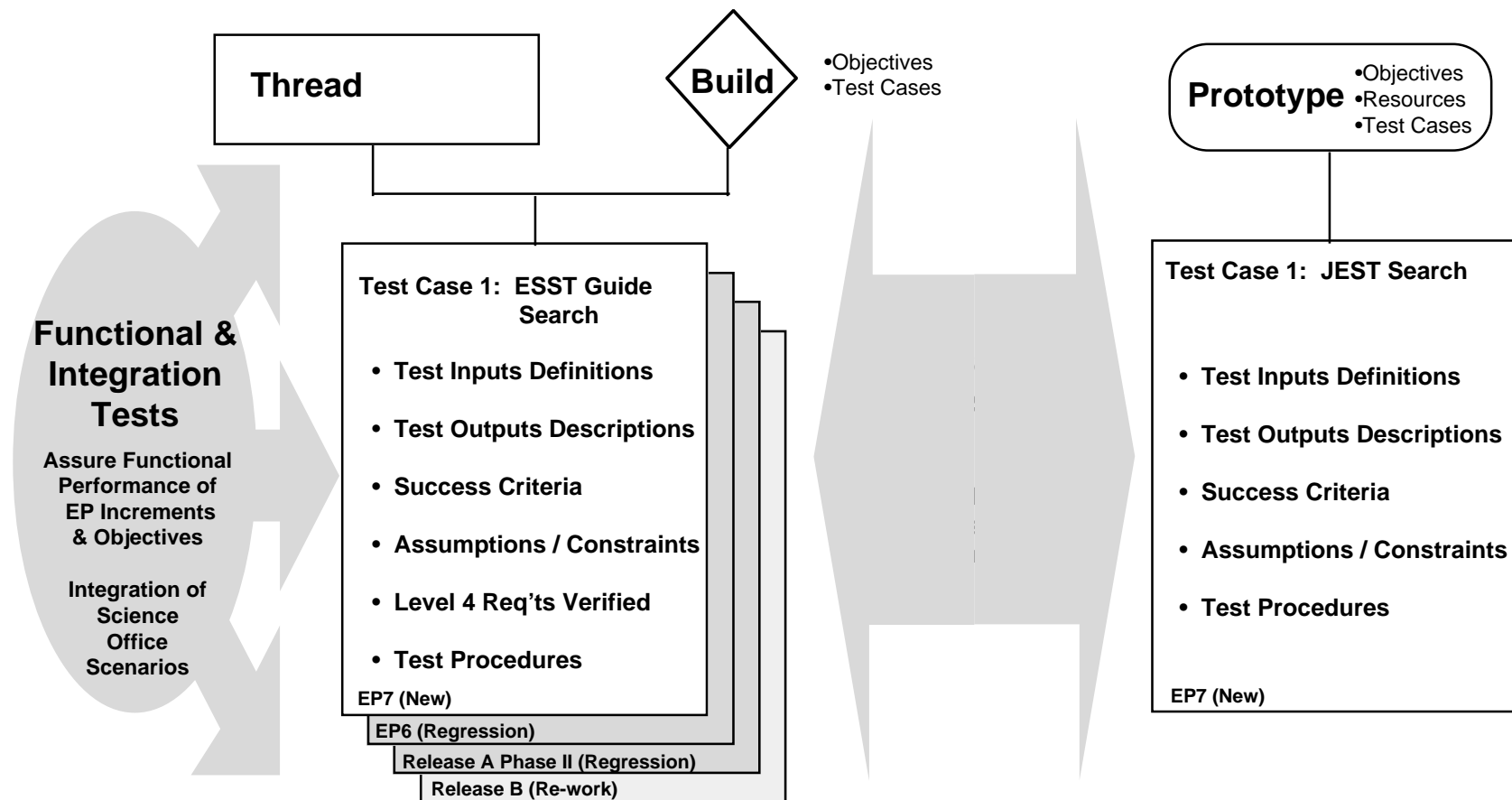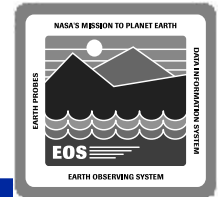
Mode Management Service:

- Agent :   Release A / Phase 2
- ProcessFramework: Release A / Phase 2

EP7 I&T - Overview

- **I&T Approach for EP7**
  - **Test Case and Procedure Outline**
  - **Build / Thread Plan**
- **Test Tools**
- **Planned Resources**
- **Science Office Input To I&T**
- **Deployment Plan**

Test Cases

Thread

Build
- Objectives
- Test Cases

Prototype
- Objectives
- Resources
- Test Cases

Functional & Integration Tests

Assure Functional Performance of EP Increments & Objectives

Integration of Science Office Scenarios

Test Case 1: ESST Guide Search

- **Test Inputs Definitions**
- **Test Outputs Descriptions**
- **Success Criteria**
- **Assumptions / Constraints**
- **Level 4 Req'ts Verified**
- **Test Procedures**

EP7 (New)

EP6 (Regression)

Release A Phase II (Regression)

Release B (Re-work)

Test Case 1: JEST Search

- **Test Inputs Definitions**
- **Test Outputs Descriptions**
- **Success Criteria**
- **Assumptions / Constraints**
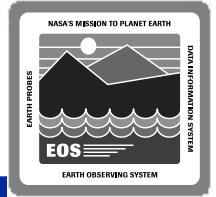- **Test Procedures**

EP7 (New)

Thread - a set of components (software, hardware, and data) and operational procedures that implement a function or set of functions.
Build - an assemblage of threads to produce a gradual buildup of system capabilities. Builds are combined with other builds and threads to produce higher level builds.
*Prototype - focused rapid development of specific system aspects which may advance evolutionary change.*
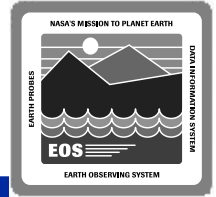
Test Procedures

- **Provided for each Test Case**
- **For ESST procedures only:**
    - **Recorded scripts via the capture/playback test tool (XRunner)**
- **Automated Scripts to be configuration controlled via ClearCase**
- **Verification and Integration of Science User Scenarios**

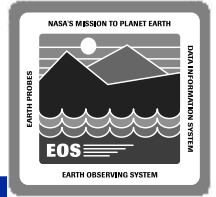# EP7 Build / Thread Plan
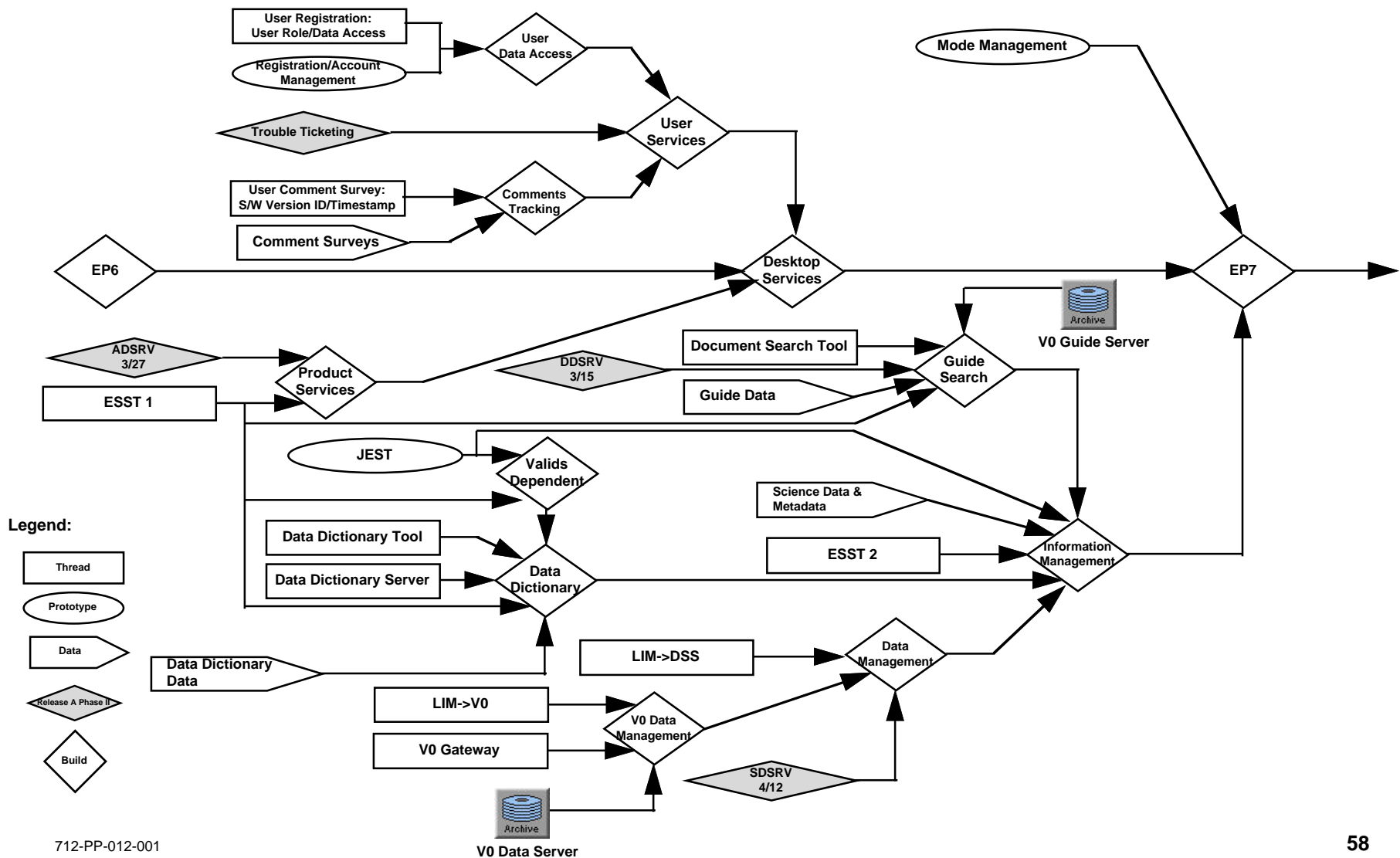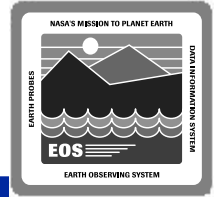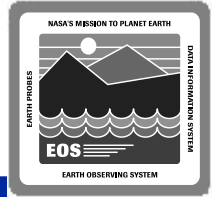
Test Tools

- **DDTS**
    - **Distributed Defect Tracking System tool to track Non-Conformance Reports logged during the I&T phase**
- **Clear Case**
    - **Configuration Management tool**
- **X Runner**
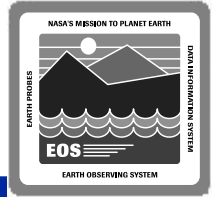   - **Capture/playback test tool to execute recorded scripts**

Planned Resources

- **Assigned I&T Workstations in the Production Cell**
- **Conduct pre-release load testing of EP7 with DAAC Liaisons**

- **Input Test Data:**

    - **Additional Earth Science Data (SO)**
    - **Additional Metadata (SO)**
    - **Comments Survey Forms (SO)**
    - **Available Advertisement Service**
    - **Additional Data Dictionary Service**
    - **Document Guide Data**
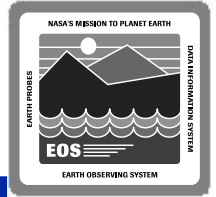
Science Office Input To I&T

- Coordinated test scheduling of EP7 and configuration of Science Office resources within the Test Environment
- Test all EP7 components for science content
    - Tests will be done at the Build Level
    - Science Office will use DDTS to report NCRs
- Conduct pre-release usability testing of EP7 components

EP7 Deployment Plan

- **Minimum configuration for production DCE cell environment**

- **Documented and tested installation, configuration, and start-up of server and client machines software**

- **EP7 installation and verification of every DAAC and tirekicker client machine which has been identified and configured at deployment time**

Wrap-up

- **DAR and DPR availability**
  - **The Data Acquisition Request (DAR) and On-Demand Processing Request (DPR) User Interfaces will be available for evaluation in the EP7 timeframe**
- **Subsetting**
  - **Leveraging off collaborative prototyping effort at UAH**
  - **Science Office actively overseeing UAH prototyping effort and providing input into the Rel B Client subsetting user interface design.**
  - **Status of the UAH subetting prototype will be maintained on the EP7 Home Page.**

Wrap-up cont'd
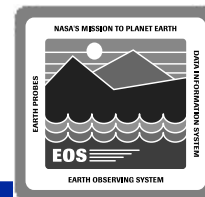
- **Next event: Test Readiness Review (TRR) - May 15th**

- **Remaining EP7 event dates**
  - **Consent-to-Ship (CSR), June 26th**
  - **Evaluation Readiness Review (ERR), July 17th**

- **Upcoming activites for DAAC Liaisons**
  - **Data capture activites with Science Office; starting now through the end of April**
  - **Development/Review of the test cases to be used for deployment to the DAACs; starting April 15th through May 15th**

- **Upcoming activities for Tirekickers**
  - **Review Science Scenarios; need feedback by May 8th**